

REC'D 04 OCT 2005

WIPO

PCT

# PATENT COOPERATION TREATY PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 43041PCX343 / 29KM	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/NZ2004/000238</b>	International filing date (day/month/year) 1 October 2004	Priority date (day/month/year) 3 October 2003
International Patent Classification (IPC) or national classification and IPC  Int. Cl. <sup>7</sup> G01N 1/44, 33/24		
Applicant <b>AGRESEARCH LIMITED et al</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

Date of submission of the demand 22 February 2005	Date of completion of the report 27 September 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>GREGORY DIVEN</b> Telephone No. (02) 6283 2992

**Box No. I      Basis of the report**

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1 (b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-16 as originally filed/furnished
  - pages\* received by this Authority on with the letter of
  - pages\* received by this Authority on with the letter of
- ☒ the claims:
- page 18 as originally filed/furnished
  - pages\* as amended (together with any statement) under Article 19
  - pages\* 17, 19 received by this Authority on 22 February 2005 with the letter of 24 February 2005
  - pages\* received by this Authority on with the letter of
- ☒ the drawings:
- pages 1/2-2/2 as originally filed/furnished
  - pages\* received by this Authority on with the letter of
  - pages\* received by this Authority on with the letter of
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000238

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims 1-26	YES
	Claims	NO
Inventive step (IS)	Claims 1-26	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-26	YES
	Claims	NO

## 2. Citations and explanations (Rule 70.7)

The following documents identified in the International Search Report have been considered for the purposes of this report:

DE 3604761

Novelty (N)

The cited document fails to disclose all of the features of each of the independent claims. Therefore all of the claims are novel.

Inventive Step (IS)

The claimed invention is not obvious in the light of the cited document nor is it disclosed in any obvious combination of them. It is also considered that it would not be obvious to a person skilled in the art in the light of common general knowledge either by itself or in combination with any of these documents.

Industrial Applicability (IA)

The claims are related to products capable of commercial application.

**WHAT WE CLAIM IS:**

1. A method for drying soil in preparation for analysis including the steps of:
  - (a) increasing the surface area of the soil;
  - (b) forcing a substantially inert gas through the soil;
  - (c) subjecting the soil to an elevated temperature that does not exceed approximately 50°C.
2. The method of claim 1 wherein the sample is prepared for analysis after approximately 1 hour of processing via steps (a) to (c).
3. The method of claim 1 wherein the sample is prepared for analysis after approximately 20 minutes of processing via steps (a) to (c).
4. The method as claimed in any of the above claims wherein the moisture content after steps (a) to (c) is less than approximately 9% wt.
5. The method as claimed in any of the above claims wherein the increase in surface area during step (a) is completed by breaking the soil down into smaller particles by mechanical motion.
6. The method as claimed in any of the above claims wherein the mean particle size after step (a) is substantially less than 10mm.
7. The method as claimed in any of the above claims wherein the inert gas of step (b) is air.
8. The method as claimed in any of the above claims wherein the inert gas of step (b) is moisture free.

equipment is preheated before step (c).

20. The method as claimed in any of the above claims wherein the method includes a further step (d) of:

(d) moving the soil.

21. The method as claimed in claim 20 wherein the particles remain moving for substantially all of the drying time.

22. An assembly for drying of soil which includes:

(a) an inert gas supply device which is capable of forcing inert gas through a soil sample;

(b) a heating element which is capable of subjecting the soil to an elevated temperature of less than approximately 50°C.

23. The assembly as claimed in claim 22 wherein the assembly further includes a soil crusher device which is capable of increasing the surface area of the soil.

24. The assembly as claimed in claim 22 or claim 23 where the assembly further includes a device capable of keeping the soil in motion.

25. A method of drying soil in preparation for analysis substantially as hereinbefore described and with reference to the accompanying examples and figures.

26. An assembly for drying soil in preparation for analysis substantially as hereinbefore described and with reference to the accompanying examples and figures.